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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,784	12/20/2001	Reinhold Wimberger-Friedl	NL 000774	3142

7590 03/12/2003

U.S. Philips Corporation  
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EXAMINER

THOMAS, COURTNEY D

ART UNIT PAPER NUMBER

2882

DATE MAILED: 03/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/024,784

Applicant(s)

WIMBERGER-FRIEDL ET AL.

Examiner

Courtney Thomas

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

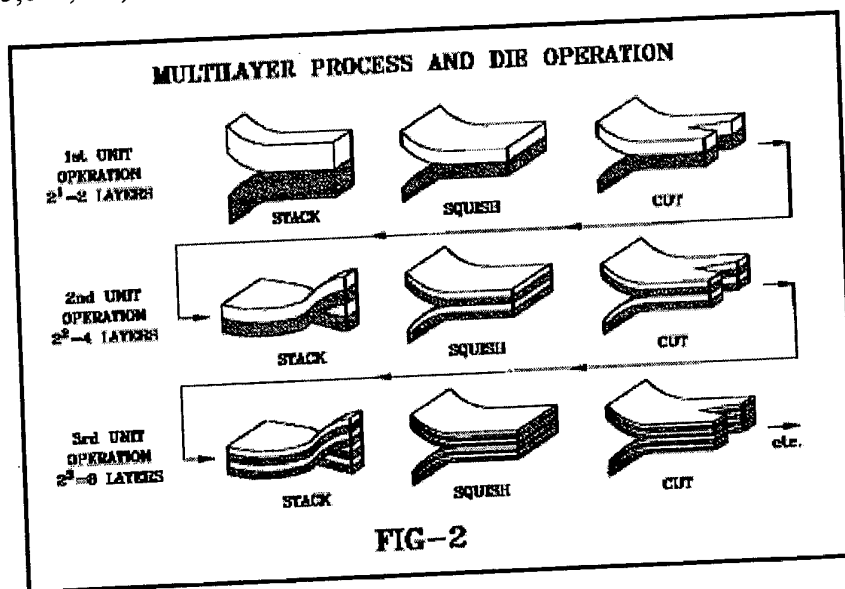
## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reilly et al (U.S. Patent 5,866,265).



3.

Figure 2 - U.S. Patent 5,866,265 to Reilly et al.

4. As per claim 1, Reilly et al. disclose a method of manufacture wherein material strips having different properties (column 3, lines 5-9; 48-59) are extruded to form regions of a grid structure (Fig. 2, above). Reilly et al. do not explicitly disclose the step of allowing at least one of the extruded material strips to expand in at least one direction such that at least one dimension of the extruded material strips prior to extrusion is restored.

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5. Reilly et al. teach however, a step involving the expansion of extruded material strips in at least one direction. Additionally, Reilly et al. suggest as in Fig. 2 above, that the process also include the step of allowing at least one dimension of the extruded material strips prior to extrusion be restored (see "cut" step). By way of example, Reilly et al. teach that such operation results in an ability to successfully duplicate the multiplication process, thereby enabling the construction of several patterned layers to achieve an intended thickness, density or material characteristic (see abstract; column 1, lines 1-31).

6. It would have been obvious to modify the method of Reilly et al. such that it incorporated the step of allowing at least one of the extruded material strips to expand in at least one direction such that at least one dimension of the extruded material strips prior to extrusion is restored. One would have been motivated to make such a modification so that the multiplication process is easily duplicated, resulting in the construction of several patterned layers to achieve an intended thickness, density or material characteristic as suggested by Reilly et al. (abstract; column 1, lines 1-31; Fig. 2 above).

7. As per claim 2, Reilly et al. as modified above, disclose a method of manufacture wherein material strips are co-extruded (Fig. 2, above).

8. As per claim 7, Reilly et al. as modified above, disclose a method of manufacture wherein material strips travel in opposite directions (Fig. 2, above).

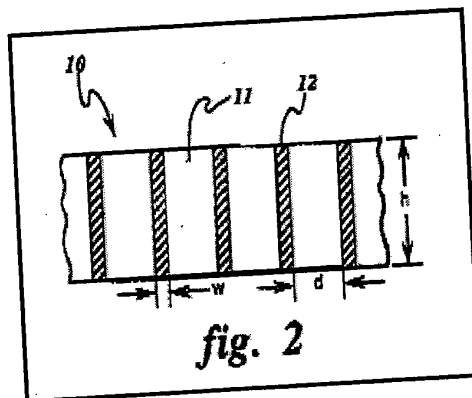
### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reilly et al (U.S. Patent 5,866,265) in view of Zarnoch et al. (U.S. Patent 5,581,592).
11. As per claim 3, Reilly et al. as modified, do not explicitly disclose a method wherein the grid structure is an X-ray scatter grid with successive regions having different X-ray absorption coefficients, the material strips used having different X-ray absorbing behavior.



12.

Figure 2 - U.S. Patent 5,581,592 to Zarnoch et al.

13. Zarnoch et al. disclose a grid structure (10) with successive regions having different X-ray absorption coefficients, the material strips (11, 12) having different X-ray absorbing behavior (abstract, column 3, lines 61-64).
14. It would have been obvious to modify the method of Reilly et al. such that the grid comprised successive regions having different X-ray absorption coefficients; and wherein the material strips possessed different X-ray absorbing behaviors. One would have been motivated to make such a modification so that the grid could be used for a user-determined application. Additionally, one would have been motivated to make such a modification so that the grid reduces scattered radiation by absorbing transmitted rays, thereby improving image quality as taught by Zarnoch et al. (column 3, lines 45-54; column 4, lines 60-63).

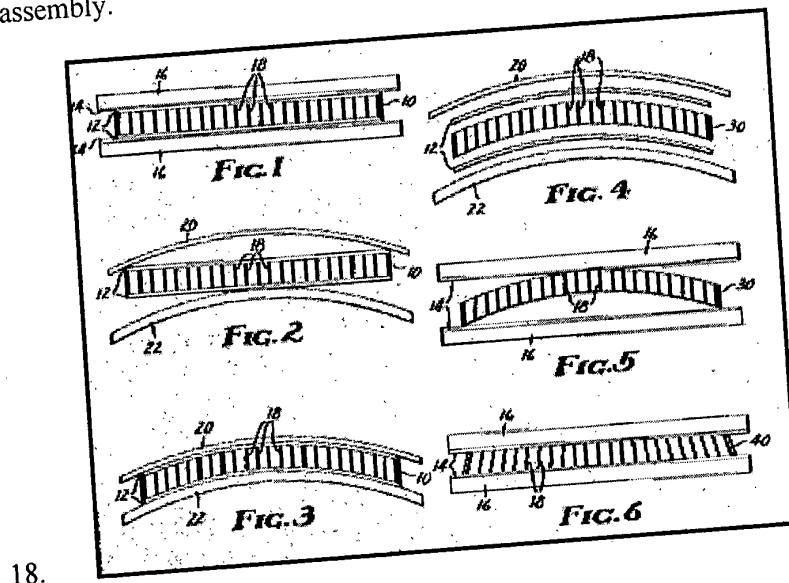
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15. As per claim 4, Reilly et al. as modified disclose a method wherein two different material strips are fed into the entrance of a device for multiplying material strips, said material strips being divided a number of times during their travel through the device and being arranged in layers, thus forming an assembly of alternating material strips (see Fig. 2 above; column 3, lines 5-17).

16. Claims 5 and 6 rejected under 35 U.S.C. 103(a) as being unpatentable over Reilly et al (U.S. Patent 5,866,265) and Zarnoch et al. (U.S. Patent 5,581,592) in view of Stevens (U.S. Patent 3,919,559).

17. As per claim 5, Reilly et al. as modified, do not explicitly disclose a method wherein the grid (assembly) is deformed in a direction transverse to a propagation direction of the material strips; the assembly subsequently subjected to a re-conversion into a flat assembly, wherein neighboring regions remain in an inclined position relative to one another and focused to a centerline of the assembly.



Figures 1-6 - U.S. Patent 3,919,599 to Stevens

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19. Stevens discloses a method of deforming a grid assembly (Figs. 1-3); the assembly subsequently subjected to a re-conversion into a flat assembly wherein neighboring regions remain in an inclined position relative to one another and focused to a centerline of the assembly (Figs. 4-6).

20. It would have been obvious to further modify the method of Reilly et al. such that it incorporated the steps of deforming the grid assembly in a direction transverse to a propagation direction and subsequently reconvert the assembly into a flat assembly, wherein neighboring regions remain in an inclined position relative to one another and focused to a centerline of the assembly. One would have been motivated to make such a modification so that the grid assembly is constructed to provide shaper focusing of incident radiation due to increased absorption of secondary radiation as taught by Stevens (column 1, lines 34-53).

21. As per claim 6, Reilly et al. as modified in view of Zarnoch et al. and Stevens do not disclose the use of grid assembly manufactured by the method recited in claim 1, utilized in an x-ray examining apparatus.

22. It would have been obvious to further modify the method of Reilly et al. such that the constructed grid assembly is incorporated within an x-ray examining apparatus. One would have been motivated to make such a modification so that so that the grid reduces scattered radiation by absorbing transmitted rays, thereby improving image quality of received radiation.

#### ***Response to Arguments***

23. Applicant's arguments filed 1.27.03 have been fully considered but they are not persuasive. As noted above, Reilly et al. do not explicitly disclose a manufacturing step of allowing at least one of the extruded material strips to expand in at least one direction such that

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at least one dimension of the extruded material strips prior to extrusion is restored. However, Reilly et al. teach by way of illustration (Fig. 2 above), a manufacturing step involving the expansion of extruded material strips in at least one dimension (see "squish" step). Additionally, Reilly et al. also suggest that the process also include the step of allowing at least one dimension of the extruded material strips prior to extrusion be restored (see "cut" step). Reilly et al. teach that such operation results in an ability to successfully duplicate the multiplication process, thereby enabling the construction of several patterned layers.

24. Examiner notes that the process disclosed by Reilly et al. provides the framework for the process illustrated in applicants' enclosed drawings (see Fig. 7, below). Examiner contends that the claimed method would be an obvious design choice to a practitioner in the material processing art as a means for producing a material having an intended thickness, density or other material characteristic (see Reilly et al. abstract; column 1, lines 1-31)

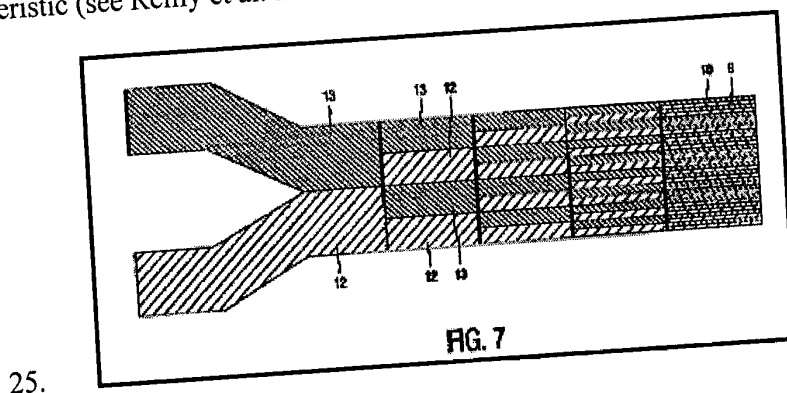


Figure 2 - U.S. Patent Application Publication US 20020176538 A1 to Wimberger-Friedl et al.

### Conclusion

26. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Courtney Thomas whose telephone number is (703) 306-0473. The examiner can normally be reached on M - F (9 am - 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (703) 305 3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0530.

Courtney Thomas

February 24, 2003

  
SUPERVISOR  
TECHNICAL